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Indian Standard

PHOTOGRAPHY — OVERHEAD PROJECTORS

PART 1 PROJECTION STAGES — DIMENSIONS

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Indian Standard

PHOTOGRAPHY — OVERHEAD PROJECTORS

PART 1 PROJECTION STAGES — DIMENSIONS

NATIONAL FOREWORD

This Indian Standard, which is identical with ISO 7943 - 1 : 1987 'Photography — Overhead projectors — Part 1 : Projection stages — Dimensions', issued by the International Organization for Standardization (ISO), was adopted by the Bureau of Indian Standards on 8 May 1990 on the recommendation of the Optical and Mathematical Instruments Sectional Committee (LMD 20) and approval of the Light Mechanical Engineering Division Council.

The text of the ISO Standard has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as decimal marker while in Indian Standards the current practice is to use point (.) as the decimal marker.

CROSS REFERENCES

In this Indian Standard, the following International Standards are referred to. Read in their places the following:

International Standard	*Corresponding Indian Standard*	*Degree of Correspondence*
ISO 7943 - 2 : 1987 Photography — Overhead projectors — Part 2 : Transparencies and transparency frames — Dimensions	IS 13011 (Part 2) : 1990 Photography — Overhead projectors : Part 2 Transparencies and transparency frames — Dimensions	Identical
ISO 7943 - 3 : 1987 Photography — Overhead projectors — Part 3 : Film rolls, cores and winders — Dimensions	IS 13011 (Part 3) : 1990 Photography — Overhead projectors : Part 3 Film rolls, cores and winders — Dimensions	Identical

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0 Introduction

ISO 7943 consists of the following parts;

Part 1 : Projection stages — Dimensions.

Part 2 : Transparencies and transparency frames — Dimensions.

Part 3 : Film rolls, cores and winders — Dimensions.

The overhead projectors covered by ISO 7943 are the types most commonly used for educational and training purposes. Specialized equipment for the projection of, for example, radiographic plates is not dealt with in ISO 7943.

1 Scope and field of application

This part of ISO 7943 specifies the dimensions of projection stages and location pins for overhead projectors in order to ensure compatibility between the projectors and their transparencies.

Two types of overhead projector are specified in this part of ISO 7943, i.e. type A (250 mm × 250 mm) and type B (285 mm × 285 mm), the significant difference between them being the size of the picture area.

2 Definitions

For the purpose of this part of ISO 7943 the following definitions apply.

2.1 projection stage : The working surface on an overhead projector where transparencies or other material are placed for projection.

2.2 clear area : That part of the projection stage which presents no obstruction to a framed transparency (see ISO 7943-2) or a film roll (see ISO 7943-3).

2.3 object plane : That part of the surface of the projection stage on which transparencies are placed for projection.

2.4 picture area : That part of the projection stage from which an image is projected (see figure 1).

2.5 location pins : Pins situated on the projection stage for positioning transparencies in the picture area.

2.6 projection stage aperture : An aperture in the projection stage which determines the boundary of the light beam to the picture area.

3 Dimensions of picture area (with rounded or diagonally cut corners), location pins and clear area

3.1 The dimensions of the picture area (with rounded or diagonally cut corners), location pins and clear area shall be as specified in the table and as shown in figures 2, 3, 4 and 5.

3.2 Within the clear area, the projection stage shall be flat with no step greater than 2 mm in either direction between the level of the object plane and that of the surrounding projection stage.

NOTE — The provision of a depression for use as, for example, a pen tray is not disallowed by this requirement, provided there is no adverse effect on user operation of the projector or on the flatness of any transparency placed on the projection stage.

3.3 Location pins :

— For the purpose of this International Standard, the provision of location pins is optional.

— If location pins are provided, they shall comply with the dimensions given in the table and shall be retractable in order that they may be set below the level of the projection stage.

— The effective height of the location pins shall be measured perpendicularly from the surface of the highest part of the projection stage.

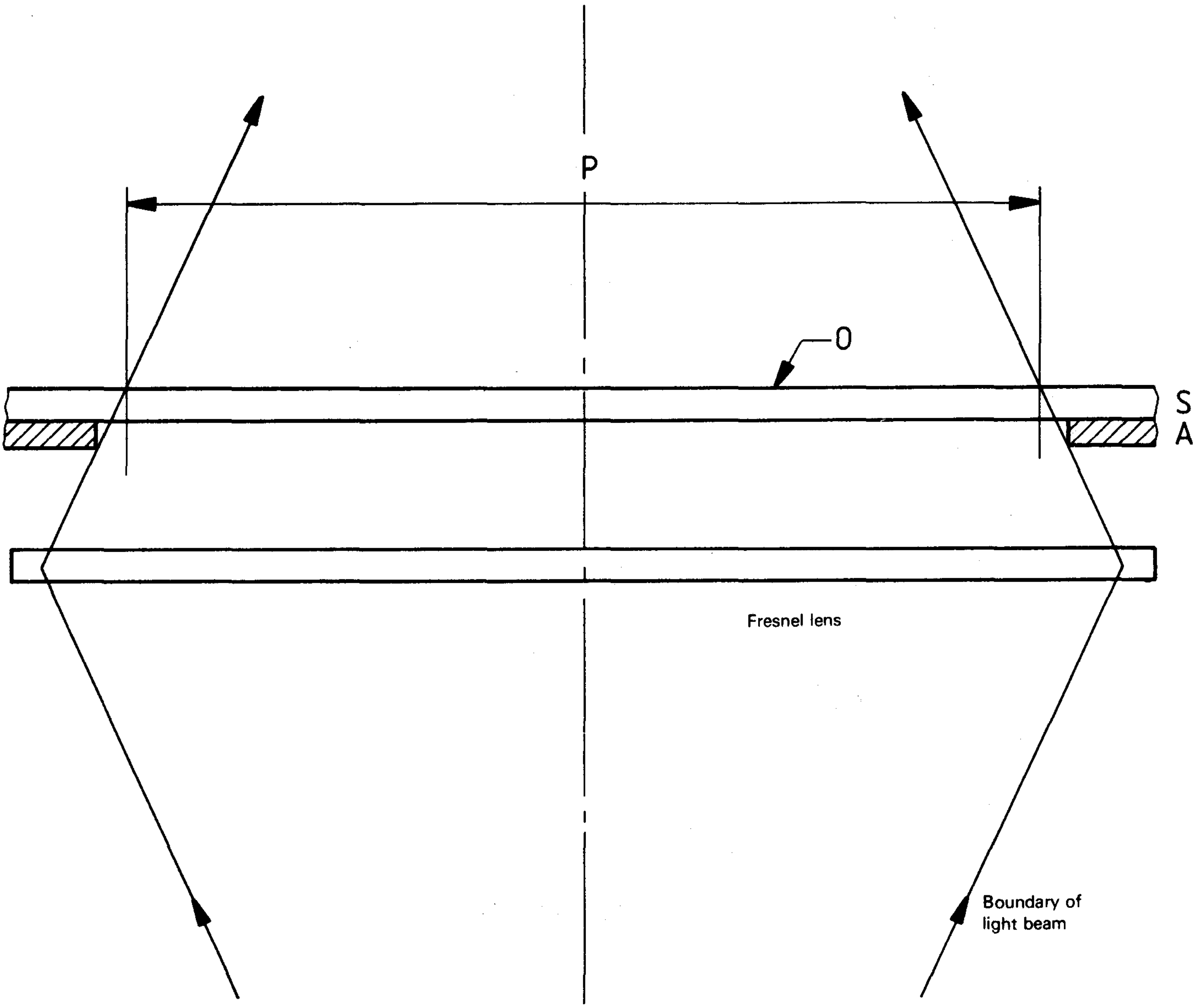
Table

Dimensions in millimetres

Projector			**Type A** (See figure 2)	**Type B** (See figure 3)
Picture area1)	major dimensions		$250^{+5}_{-1} \times 250^{+5}_{-1}$	$285 \pm 2 \times 285 \pm 2$
	corner cut		radius 60 max.	diagonal 40 max. × 40 max. radius 40 max.2)
Location pins (see 3.3)	height		5,0 ± 1,0	
	top and left	between centres	80 ± 0,2	
		diameter	$5^{0}_{-0,2}$	
	bottom	between centres	270 ± 1,0	
		diameter	$5^{0}_{-0,2}$	
Clear area (see 3.2)			See figure 4	See figure 5

1) The picture area is that part of the projection stage through which useful light passes. It is the limit to the size of transparency picture areas that can be projected. See 2.4, 2.6 and figure 1.

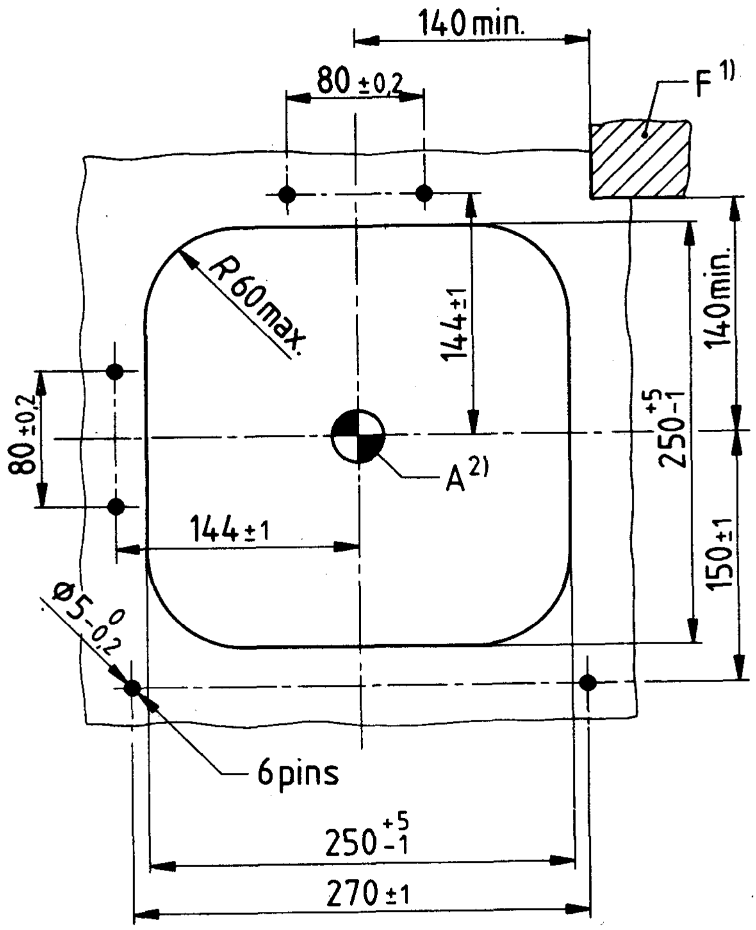
2) The rounded corners are optional.



P = Picture area
O = Object plane
S = Projection stage
A = Projection stage aperture

Figure 1 — Part of the construction of overhead projectors to show the relationship between projection stage aperture, picture area, projection stage and object plane (given as an example)

Dimensions in millimetres

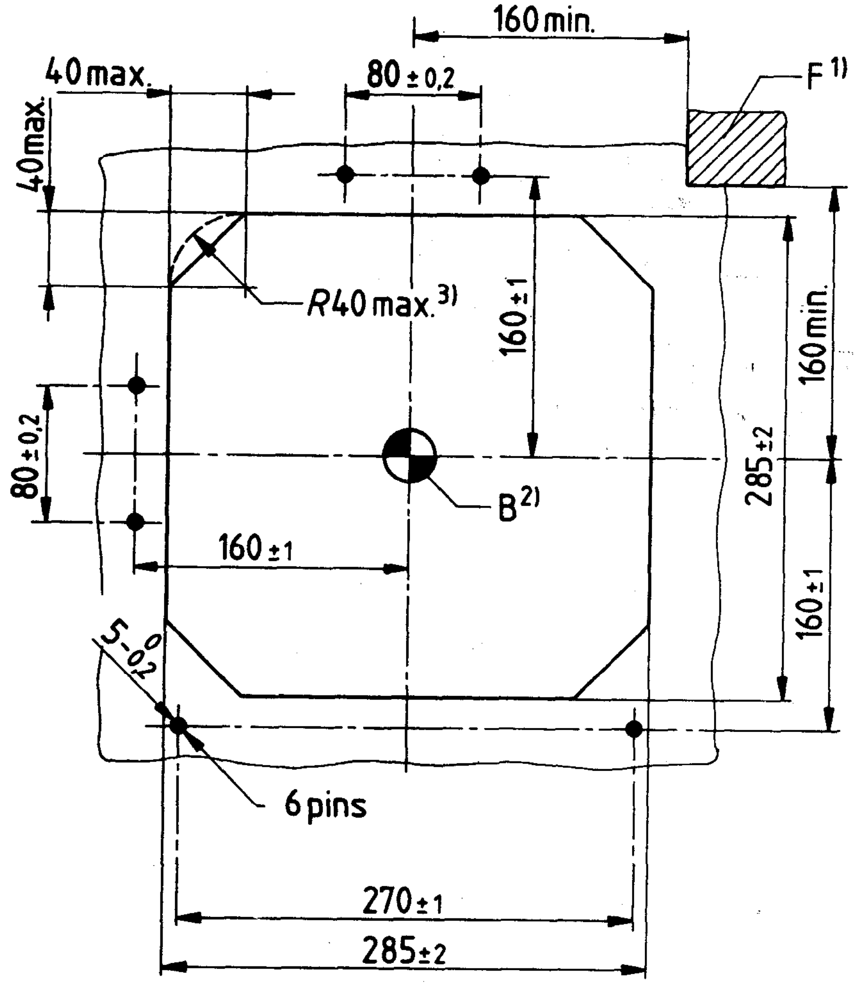


1) The cross-hatched area F is the closest position for the projection head support post (see also figure 4).

2) A is the optical centre of the picture area.

Figure 2 — Dimensions of picture area and positions of location pins on projector stage for type A projector

Dimensions in millimetres



1) The cross-hatched area F is closest position for the projection head support post. (See also figure 5.)

2) B is the optical centre of the picture area.

3) The rounded corners are optional.

Figure 3 — Dimensions of picture area and positions of location pins on projector stage for type B projector

Dimensions in millimetres

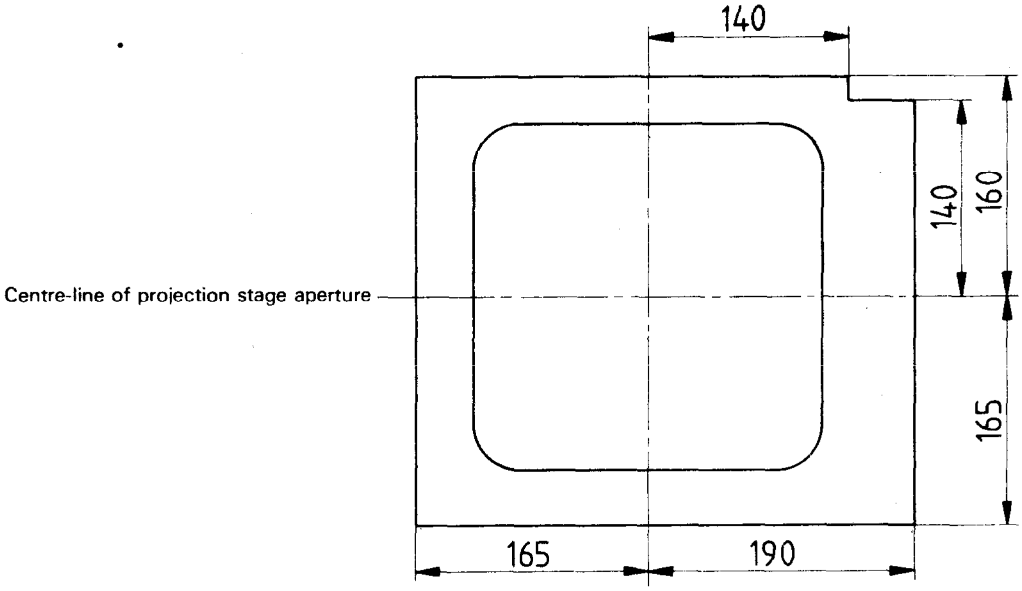


Figure 4 — Dimensions of clear area on type A overhead projector

Dimensions in millimetres

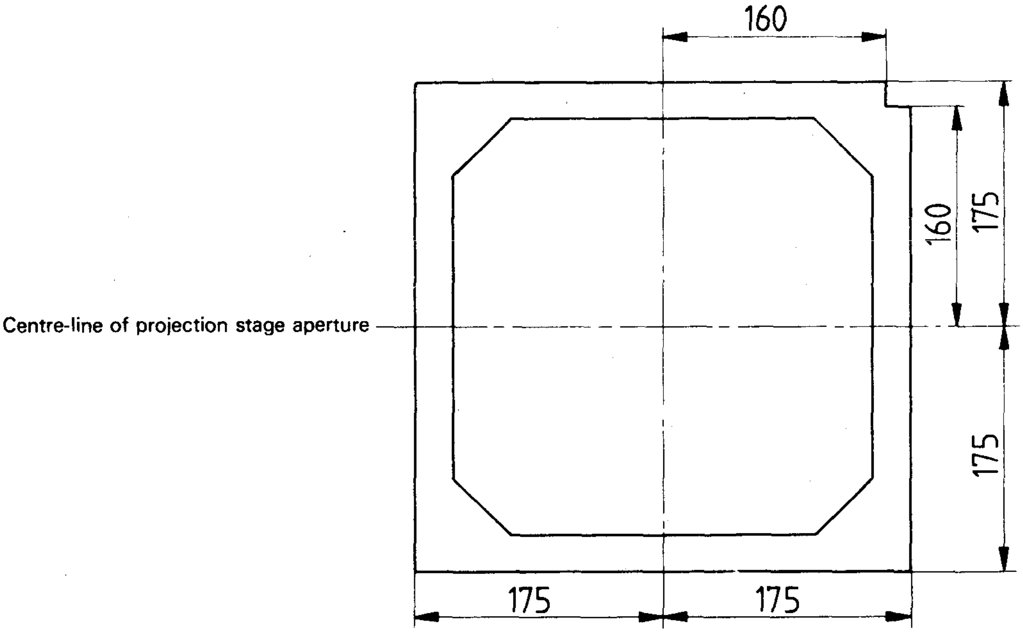


Figure 5 — Dimensions of clear area on type B overhead projector

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